

REMARKS

In the Office Action, the Examiner indicated that claims 1 through 42 are pending in the application and the Examiner rejected all claims.

The Double Patenting Rejection

On page 2 of the Office Action, the Examiner rejected claims 1-42 under the judicially created doctrine of double patenting over claims 1-51 of U.S. Patent No. 6,757,708. Applicant has amended the claims herein and, at this time, does not address the double patenting rejection, in view of the claim changes. Applicant reserves the right to, if needed, file a Terminal Disclaimer to overcome the double patenting rejection, should the need arise.

Claim Rejections Based on Art

In item 3 on page 4 of the Office Action, the Examiner rejected claims 1-2, 4-12, 14-18, 20-28, 30-36, and 38-42 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,591,266 to Li et al. ("Li"). On page 8 of the Office Action, the Examiner rejected claims 3, 13, 19, 29 and 37 under 35 U.S.C. §103 as being unpatentable over Li et al. in view of U.S. Patent No. 6,199,107 to Dujari.

The Present Invention

The present invention provides an improved cache management method and system for storing dynamic contents in a computing environment. The cache management method considers predetermined parameters associated with the cost of generating dynamic content, such as the financial and "CPU costs" associated with generating web pages, and selectively replaces the dynamic contents that are stored in the cache with new dynamic content based on the predetermined parameters, e.g., the generation costs. In this manner, storage of dynamic content in the cache is prioritized based on the cost of regenerating the dynamic content as compared to the cost of regenerating already-cached content. In the previously described web page example, pages stored in the cache that are expensive (e.g., in terms of dollars, CPU time, etc.) to recreate are not replaced with the new pages and the costs of providing dynamic pages to the users can be reduced significantly.

In a preferred embodiment, each time a dynamic page is created, the generation cost information identifying the cost of generating that page is associated with that page, e.g., using tags. A newly generated page can be stored in the cache of a server if there is an empty slot in the cache, so that the new page can be retrieved from the cache for a subsequent use. If the cache is full, however, the server uses the generation cost information to determine if any of the cached pages should be replaced with the new page. The server compares the generation cost of the new page with the generation costs of the cached pages and selects for removal a cached page that is less expensive to recreate compared to the new page. The selected cached page is replaced with the new page in the cache. Thus, the present invention provides a cache management system and

method which implements a page replacement technique having a more global view, in that it considers the entire cost of generating a dynamic page from all involved machines and networks before the page can be replaced in the cache. As a result, the cost of providing dynamic pages to end-users can be reduced significantly and the efficient allocation of resources can be achieved in connection with the generation of dynamic pages.

U.S. Patent No. 6,591,266 to Li et al.

U.S. Patent No. 6,591,266 to Li et al. ("Li") teaches a system for updating web pages stored in cache based on modifications to data stored in a database. Li is designed to "reduce response and access time through content delivery systems that use intelligent caching and proxy servers to redirect users to available servers that contain the desired content and are close to or easily accessible by the users. With some of the traffic redirected, traffic surges will decrease and end users benefit from faster response time." Li, column 7, lines 17-24.

U.S. Patent No. 6,199,107 to Dujari

U.S. Patent No. 6,199,107 to Dujari ("Dujari") teaches a method and system for caching partial downloads of network content and using that cached partial content to satisfy requests for content from client applications, in a manner that is invisible to the application. The Examiner relies upon Dujari for an alleged teaching of the separation of HTML components separated by a tag.

The Cited Prior Art Does Not Anticipate the Claimed Invention

The MPEP and case law provide the following definition of anticipation for the purposes of 35 U.S.C. §102:

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.”
MPEP §2131 citing *Verdegaal Bros. v. Union Oil Company of California*, 814 F.2d 628, 631, 2 U.S.P.Q. 2d 1051, 1053 (Fed. Cir. 1987)

The Examiner Has Not Established a *prima facie* Case of Anticipation

As noted above, the present invention is directed to a method and system for maximizing the benefits from caching. More particularly, the present invention identifies the generation costs of particular pieces of content (the monetary costs, the processing costs in terms of time and resources, etc.) and then decides what to cache based upon the values of these generation costs. Content that is more costly to recreate is cached ahead of content that is less costly to recreate.

Nothing in Li even remotely suggests considering the generation costs of content prior to caching it. The only mention of “cost” in Li relates to a technique for invalidating a specific set of cached pages based on a change to the database, with the result being that there is no need to incur the “cost” of generating a new view table to determine which pages are related to which content. This is entirely unrelated to the concept of ascertaining the generation costs of content prior to caching it and then using that determination in determining whether or not to cache it.

The claims have been amended to more particularly set forth the consideration of generation costs (also called “creation costs”) of content when deciding if the content is to be cached. Each of the independent claims expressly recite these elements. Numerous other claim

amendments have been made to assure that the dependent claims correspond to the amended independent claims and/or to correct minor deficiencies. Since Li does not teach (or even suggest) the claimed subject matter, it is inappropriate to reject the claims based upon Li. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejection of claims 1-2, 4-12, 14-18, 20-28, 30-36, and 38-42 under 35 U.S.C. § 102.

Accordingly, each of the independent claims, and all claims depending therefrom, patentably define over Li and are in condition for allowance.

The Examiner has not Established a *prima facie* Case of Obviousness

As set forth in the MPEP:

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skilled in the art, to modify the reference or to combine reference teachings.

MPEP 2143

As noted above, each of the independent claims expressly recite the use of generation costs in determining whether or not content will be cached. The teachings of Dujari do not render the present invention obvious. Specifically, there is nothing in either Dujari nor Li to suggest their modification to achieve the claimed invention. The mere fact that Dujari may teach the use of tags in HTML has nothing to do with the tagging of generation cost information, and certainly does not suggest modifying its own disclosure or that of Li to achieve the claimed elements discussed above. Accordingly, the combination proposed by the Examiner in rejecting the claims under 35

U.S.C. §103 is inappropriate. The Examiner is respectfully requested to reconsider and withdraw the rejection of claims 3, 13, 19, 29, and 37 under 35 U.S.C. § 103.

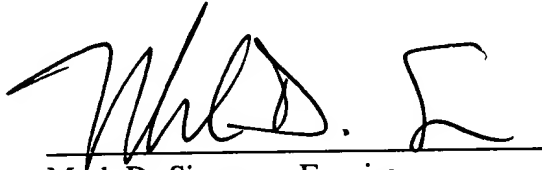
Conclusion

The present invention is not taught or suggested by the prior art. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejection of the claims. An early Notice of Allowance is earnestly solicited.

A Petition extending the period for response to November 15, 2004, is enclosed, along with a Credit Card Payment Form, authorizing the payment of the extension fee. The Commissioner is hereby authorized to charge any fees associated with this communication to Deposit Account No. 09-0461.

Respectfully submitted

November 15, 2004
Date


Mark D. Simpson, Esquire
Registration No. 32,942

SYNNESTVEDT & LECHNER LLP
2600 ARAMARK Tower
1101 Market Street
Philadelphia, PA 19107

Telephone: (215) 923-4466
Facsimile: (215) 923-2189